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EXAMINER FLEISCHER, MARK A				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/648,722

**Applicant(s)**

NAKAMINAMI ET AL.

**Examiner**

MARK A. FLEISCHER

**Art Unit**

4143

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☒ Claim(s) 6-8, 10, 11, 14 and 16 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 August 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☒ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB-083)
- Paper No(s)/Mail Date 25 August 2003
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

**Status of Claims**

1. This action is in reply to the Application filed on 25 August 2003.
2. Claims 1–16 are currently pending and have been examined.

***Information Disclosure Statement***

3. The Information Disclosure Statement filed on 25 August 2003 has been considered. An initialed copy of the Form 1449 is enclosed herewith.

***Oath/Declaration***

4. Examiner herewith acknowledges Applicant's claim to foreign priority for Japan application 2003-174234 filed 19 June 2003 as noted in the Declaration.

***Drawings***

5. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 110A, 110B, 110C, 111C. Because of the number of drawings, Applicant should carefully examine them in conjunction with the disclosure to ensure that all reference labels in the drawings are described in the disclosure. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the

examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Specification***

6. Applicant is reminded of the proper language and format for an abstract of the disclosure. The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details. The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.
7. The abstract of the disclosure is objected to because it is comprised of two paragraphs and its length exceeds 150 words. Correction is required. See MPEP § 608.01(b).
8. The incorporation of essential material in the specification by reference to an unpublished U.S. application, foreign application or patent, or to a publication is improper and does not refer to the foreign application in the first line of the specification. Applicant is required to amend the disclosure to include the material incorporated by reference, if the material is relied upon to overcome any objection, rejection, or other requirement imposed by the Office. The amendment must be accompanied by a statement executed by the applicant, or a practitioner representing the applicant, stating that the material being inserted is the material previously incorporated by reference and that the amendment contains no new matter. 37 CFR 1.57(f).
9. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

10. The disclosure is objected to because of the following informalities:

- The specification lacks paragraph numbering. 37 CFR §1.52 (b)(6) provides "Other than in a reissue application or reexamination proceeding, the paragraphs of the specification, other than in the claims or abstract, may be numbered at the time the application is filed, and should be individually and consecutively numbered using Arabic numerals, so as to unambiguously identify each paragraph. The number should consist of at least four numerals enclosed in square brackets, including leading zeros (e.g., [0001]). The numbers and enclosing brackets should appear to the right of the left margin as the first item in each paragraph, before the first word of the paragraph, and should be highlighted in bold. A gap, equivalent to approximately four spaces, should follow the number..." Examiner requests that Applicant number the paragraphs in accordance with the above-cited rule so as to facilitate examination.
- On page 2, line 2 Applicant refers to "runtime is monitored" which Examiner believes should more properly read *runtime process is monitored*. Also, this first sentence appears incomplete. Examiner believes the Applicant attempts to convey that the process runtime is used as a measure of system performance.
- On page 2, at the bottom, the reference to the U.S. Patent is not a sentence and therefore grammatically and structurally incorrect.
- On page 3, in the sentence beginning with "It is difficult...since there is no means..." the second "is" should be replaced with "are".
- On page 5, line 1 the term "BSL" is undefined.

#### ***Claim Objections***

11. Claim 6 is objected to because of the following informalities: The limitation beginning with a *monitoring/evaluation information*...contains numerous times the last phrase *and a definition of and after subjected* which are grammatically problematic and unclear.

12. Claim 7 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. The claim is superfluous and therefore does not further limit the parent claim as it applies to business flows which, by necessity, are comprised of subflows (including the case where there is one task. Note that any non-empty set contains at least one sub-set; *i.e.*, the original or whole set.) Applicant is required to cancel the claim, or amend the claim to place the claim in proper dependent form, or rewrite the claim in independent form.
13. Claim 8 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Claim 6 effectively articulates the scope of this claim. Applicant is required to cancel the claim, or amend the claim to place the claim in proper dependent form, or rewrite the claim in independent form.
14. Claim 10 is objected to because of the following informalities: the phrase in the limitation to *be monitored notified* is grammatically problematic. Appropriate correction is required.
15. Claim 11 is objected to because of the following informalities: the phrasing in the limitations is unnecessarily convoluted, confusing and grammatically problematic. Moreover, the two limitations in the claim are redundant. Appropriate correction is required.
16. Claim 14 is objected to because of the following informalities: the phrase *means for retrieving said service provider* appears incorrect. Examiner believes this is merely a grammatical error and should read *means for retrieving said service provider information*. Also, the phrase *service provide* should read *service provider*. Appropriate correction is required.
17. Claim 16 is objected to because of the following informalities: the phrase *in said processor unique to said processor* is nonsensical and/or superfluous. Examiner believes this is merely a typographical error and that the second occurrence of *processor* should be replaced by the word *provider*. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

18. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

19. Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claim language is indefinite because it is unclear what the qualifying condition *which satisfies a predetermined condition* refers to, i.e., whether it is a particular computer that satisfies the condition or the extracted data. Note, that for purposes of examination, Examiner will assume it refers to either the extracted data or the computer component or apparatus.
20. Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claim language is indefinite because it is unclear in terms of the meaning of several phrases including, but not limited to, the phrases *retrieves said service provider*, and the phrase *after subjected*. The method of *retrieving a service provider* does not make sense. Nor does the phrase *being retrieval conditions*. For purposes of examination, Examiner interprets this to mean *retrieves service provider information*.
21. Claim 12 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claim language is indefinite because it is self-contradictory: the *means for decrypting information* implies a method step that is not clearly or concisely stated followed by another method step *and then sending such encrypted information* where this latter phrase also lacks sufficient antecedent basis and contradicts the sending of decrypted information. In addition, the first limitation also lacks sufficient antecedent basis.

#### ***Claim Rejections - 35 USC § 102***

22. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

23. Claims 1–5 are rejected under 35 U.S.C. 102(a) as anticipated by Hellerstein (US 20030004848

A1).

**Claims 1, 3, 4 and 5:**

Note that, although the limitations in this set of claims may be reworded or have slightly different structures, they have the same scope and so are addressed together. Hellerstein, as shown, describes and/or discloses the following limitations:

- *A method for evaluating a service provider by using a computer, said computer implementing the steps of:*
  - *storing information on an item of data of a history related to a transaction that is acquired by said service provider when a service provided by said service provider is used* (Hellerstein, in at least claim 1, describes an apparatus “for storing at least one of the electronic contract and results of the measurement operation.” (emphasis added) wherein said ‘apparatus’ is equivalent to a computer. Also, Hellerstein in at least [0008] discloses “[...] computer-based methods and systems for building, provisioning and executing one or more electronic service level agreements [...]” (emphasis added). Note also, that the phrase ‘electronic contract’ is equivalent to an *item of data of a history related to a transaction* because an ‘electronic contract’ *ipso facto* requires certain historical data which denote times of transactions that have occurred and/or will occur.);
  - *storing items to be monitored including an item of data used for evaluating the service provided by said service provider* (Hellerstein, in at least [0017], states: “Further, the measuring operation may comprise accumulating a historical collection of IT data and evaluating results in terms of the one or more business metrics.” Also, in the abstract Hellerstein states: “[...] the eContract may comprise information pertaining to: (a) descriptions of business transactions in IT terms; (b)



- financial implications of business transaction service levels; and (c) reporting to be done in business terms." These descriptions correspond to *items to be monitored*);
- *acquiring the history data related to a transaction acquired by said service provider from said service provider* (Note in the rejection of the previous limitations that "storing" and "accumulating" meet the limitation of *acquiring*);
  - *evaluating the service provided by said service provider based on the acquired history data related to a transaction that is acquired by said service provider and on the item of data included in said items to be monitored* (Hellerstein, in at least [0017] states: "The measuring operation may comprise [...] and evaluating results in terms of the one or more business metrics. [...] Further, the measuring operation may comprise accumulating a historical collection of IT data and evaluating results in terms of the one or more business metrics." Emphasis added. Note that 'evaluating results' corresponds to *evaluating the service provided* and that 'business metrics' corresponds to *said items to be monitored*.); and
  - *outputting a result of said evaluation* (Hellerstein, in at least [0014] states: "This method may comprise steps for: (a) identifying business transactions; (b) computing transaction service levels; (c) computing financial metrics based on service levels; and (d) reporting the results.").

**Claim 2:**

Hellerstein, as shown, describes and/or discloses the limitations of claim 1 as shown above.

Hellerstein further describes and/or discloses the following limitations.

- *wherein data included in said items to be monitored is extracted at the time of acquiring the history data related to a transaction acquired by said service provider from said service provider* (Hellerstein, in at least [0038] states: "The monitoring analysis module [ ] reads information from the eContract repository to determine..."

(emphasis added) wherein 'reads information [ ] to determine' corresponds to the *data extracted*); and

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- said *extracted data is transmitted to another computer which satisfies a predetermined condition* (Hellerstein, in at least [0038] states: "The monitoring analysis module [ ] reads information from the eContract repository to determine what data should be collected and communicates this to the enactment module," (emphasis added). The data *to be monitored* corresponds to the 'monitoring analysis module' that reads and collects, hence, *extracts* information. Note that the action 'reads information' corresponds to data that *is extracted* and the phrase 'communicates this to the enactment module' corresponds to *data [that] is transmitted to another computer which satisfies a predetermined condition* wherein the predetermined condition pertains to either the particular data or the computer module (here, the 'enactment module')).

#### ***Claim Rejections - 35 USC § 103***

24. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness

rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

25. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966),

that are applied for establishing a background for determining obviousness under 35

U.S.C. 103(a) are summarized as follows:

- a. Determining the scope and contents of the prior art.
- b. Ascertaining the differences between the prior art and the claims at issue.
- c. Resolving the level of ordinary skill in the pertinent art.
- d. Considering objective evidence present in the application indicating obviousness or nonobviousness.

26. **Examiner's Note:** The Examiner has pointed out particular references contained in the prior art of record within the body of this action for the convenience of the Applicant. Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures may apply. Applicant, in preparing the response, should consider fully the entire reference as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

27. Claims 6 – 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hellerstein in view of Main (US 5893905 A).

**Claim 6:**

Hellerstein, as shown, describes and/or discloses the following limitations:

- *A business support management system which supports a change in a business flow that uses a plurality of service providers providing a service to execute a business processing by using a computer, said system comprising:*
  - *a business service information registry* (Hellerstein, in at least [0035] refers to the "The automated service level management system, [...], comprises an electronic contract or eContract repository [...]" where the 'eContract repository' corresponds to the aforementioned registry.) *which*
    - *stores information related to a connection specification which defines a data structure of a message to be sent and received* (Hellerstein, in at least [0017] states: "[T]he IT system comprises a collection of hardware and software intended to store or deliver data in a digital form." And thus this 'digital form' corresponds the *connection specification* as well as defining a *data structure* per the limitation.),
    - *stores information related to a history specification which defines a data structure of a history related to a transaction to be acquired in said service*

*providers when said service is used* (Hellerstein, in at least [0017] states: "Further, the measuring operation may comprise accumulating a historical collection of IT data and evaluating results in terms of the one or more business metrics.").

- *transmits said collected information to another computer which satisfies a specific condition as business service information* (Hellerstein, in at least [0038] states: "The monitoring analysis module [ ] reads information from the eContract repository to determine what data should be collected and communicates this to the enactment module. The enactment module then sends command instructions to one or more of the ecAgents [ ] to collect such data from the managed elements." (emphasis added). The emphasized phrase 'what data...' thus corresponds to data *which satisfies a specific condition* and the terms 'communicates' and 'sends' obviously correspond to the terms *transmits said [ ] information*.);
- *a business service evaluation analyzer* (Hellerstein, in at least [0039] refers to "[...] an electronic contract analyzer (ecAnalyzer) [...]" and in at least [0043] refers to the "monitoring analyzer".) *which*
  - *collects said business service information from said service provider through said business service information collector* (Hellerstein, in at least [0039] refers to "[...] an electronic contract analyzer (ecAnalyzer) [...]" and in at least [0043] refers to the "monitoring analyzer".)
  - *performs tabulation of such business service information* (Hellerstein, in at least [0017] states: "The measuring operation may comprise monitoring one or more IT parameters and evaluating results in terms of the one or more business metrics." wherein the 'measuring operation' corresponds to *tabulation of [ ] business service information*.), *and then*

- *stores a result of said tabulation in said business service information registry as said business service evaluation information* (Hellerstein, in at least [0017] states: "Further, the measuring operation may comprise accumulating a historical collection of IT data and evaluating results in terms of the one or more business metrics." (emphasis added) where 'accumulating [ ] historical [ ] data' corresponds to *tabulation* and 'evaluating results in terms [of] business metrics' corresponds to *business service evaluation information*);
- *a monitoring/evaluation information designator which notifies said business service information collector and said business service evaluation analyzer of said items to be monitored and a definition of business service evaluation information* (Hellerstein, in at least [0038] states: "The monitoring analysis module [ ] reads information from the eContract repository to determine what data should be collected and communicates this to the enactment module. The enactment module then sends command instructions to one or more of the ecAgents [ ] to collect such data from the managed elements." (emphasis added). The emphasized text 'monitoring analysis module' corresponds to the *monitoring/evaluation information designator* and the phrases 'to determine...' and 'then send...' corresponds to the method steps of *said items to be monitored...*);

Hellerstein does not show the following limitations, but Main, as shown, does:

...*business process management which, with said connection specification, said history information, said flow definition and said business service evaluation information that are stored by said business service information registry being retrieval conditions* (Main, in at least [0031] states: "Also on the production server [ ] is an SLA jobflow table that identifies the jobflow of each SLA [...]. This table identifies every SLA job that needs monitoring, and each job's schedule for execution according to its SLA." wherein the said table contains the flow

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*definition.* Moreover, Main, in at least [0006] states: "The production server [ ] is a database server [...] for storing job performance data [...]. Job performance data specifies the actual performance (runtime, return codes, exceptions) of a job's current and previous executions." (emphasis added) where 'storing ...' in the 'database' corresponds *information ...stored [in a] registry* and 'previous executions' corresponds to *history information*.);

- *a business service information collector which stores items to be monitored consisting of definition information on items used for evaluating said service* (Main, in at least [0006] states: "SLA data specifies the agreements reached by Production Operations personnel and client organizations pertaining to the performance objectives of jobs." Here, the 'SLA data' corresponds to *definition information used...* ), *among said connection specification and said history specification,*
- *stores information related to a flow definition which defines said business flow* (Main, in at least [0015] states: "A fourth database stores data specifying job flows for each SLA collected [...]." (emphasis added)) *and*
- *stores business service evaluation information on a service to be provided by said service provider, when a connection is made to said service providers and said service is provided* (Main, in at least claim 7 states: "[...] wherein said production server stores said job performance data extracted from said production computer and SLA job performance data [...]" (emphasis added));
  - *collects information that is pursuant to said items to be monitored from said service provider each time said service provider processes a request for using said service* (Main, in at least the abstract states: "A system and method for monitoring the performance of selected data processing jobs [...]" (emphasis added) where the 'selected' jobs correspond to *said items to be monitored.* In at least [0015] Main further states: "A fifth database stores the

High Level Qualifiers (HLQs)/Application Groups of SLA jobs that are to be monitored each day, along with a calendar that specifies when these jobs are to be run." and corresponds to the *collector* that stores the job *connection* and *history specification*.),

- *an access controller which permits an access to said business service evaluation information that is stored by said business service information registry to a user of said service who satisfies a specific condition* (Main, in at least [0041] states: "This Logon screen allows a user access [...] if a valid user identification and password are entered.");
  - *retrieves said service provider or a service to be provided by said service provider* (Main, in at least [0008] states: "The client workstation [ ] retrieves and analyzes selected data from the databases [...]". Further, in at least [0015], Main states: "A fourth database stores data specifying job flows for each SLA [...]" (emphasis added).),
  - *defines data processing change procedure information which is used to connect components of said business flow and components of business flow after subjected to a change when the components of said business flow is to be changed* (Main, in at least [0013] states: "The Maintenance Workstations provide a convenient and efficient method of selecting jobs to be monitored, and entering and modifying SLA performance data." (emphasis added) where the emphasized text corresponds to *flow is to be changed*.), and
  - *notifies components of a business flow which will be connected to the components of the business flow after subjected to a change of said data processing change procedure information* (Main, in at least [0013] states: "The Maintenance Workstations provide a convenient and efficient method of selecting jobs to be monitored, and entering and modifying SLA performance data." (emphasis added) where the 'modifying...' corresponds to *processing*

- change procedure* and the 'jobs to be monitored' *ipso facto* implies a notification of components of a business flow per the limitation.); and
- *a message conversion processor which changes a connection procedure with the components of the business flow after subjected to said change based on said data processing change procedure information* (Main, in at least [0013] states: "The Productions consoles are computers that, in addition to executing customized code, embody a software agent that carries and translates commands between the production consoles and the production computers." (emphasis added) where the first emphasized text corresponds to a *message conversion processor* and the second emphasized text corresponds to the *conversion* process as the processor 'translates' and the production console monitors job execution (see also Main [0010])).

Note that both the references Hellerstein and Main describe inventions pertaining to 'service level management' (SLA) and 'SLA performance analysis', respectively. Therefore, it would have been obvious to one with ordinary skill in the art at the time of the invention to combine the inventions of Hellerstein and Main because each provides components that, when combined, lead to a more generalized and robust service level agreement management system that entails both automation, along with its attendant improvements in productivity and management, and performance analysis which is a necessary ingredient for improving the performance of the system.

**Claim 7:**

Hellerstein/Main describe and/or disclose the limitations in claim 6 above. Hellerstein, as shown, further describes and/or discloses the following limitations.

- *the components of said business flow include at least one of a sub-flow, a service provider, a service provided by a service provider, a computer for executing a service to be provided by a service provider, and a program for executing a service to be provided by a service provider* (Hellerstein, in at least [0020] refers to "tasks". See



also the objection to this claim above. Hellerstein, in at least [0004] also refers to a "service provider" and "a consumer of these services." (emphasis added) and in at least [0006] refers to "computer-based automation".)

**Claim 8:**

Hellerstein/Main describe and/or disclose the limitations in claim 6 above. Hellerstein, as shown, further describes and/or discloses the following limitations.

- means for determining said items to be monitored by acquiring, from said business service information registry, said connection specification and said history specification of said service provider to be monitored* (Hellerstein, in at least [0035] refers to the "The automated service level management system, [...], comprises an electronic contract or eContract repository [...]" where the 'eContract repository' corresponds to the aforementioned *registry*. Also, in at least [0036]: "Once data has been collected [...] and stored in the measurement repository [ ], the ecManager [ ] employs the eContracts in combination with the measurement repository to determine control actions to take in order to achieve business objectives." (emphasis added) where 'determine control actions', based on the 'data [ ] collected' corresponds to *connection [and history] specification* since the specification is used to determine which data are to be monitored.);
- means for determining a definition of said business service evaluation information that is used by said business service evaluation analyzer to collect business service information for processing from said items to be monitored* (Hellerstein, in at least [0017] states: "The measuring operation may comprise monitoring one or more IT parameters and evaluating results in terms of the one or more business metrics." (emphasis added) where the 'parameters' corresponds to *service evaluation information* and the 'measuring operation' and 'monitoring' corresponds to *means for determining...*); and

- *means for notifying said business service evaluation analyzer of said items to be monitored and definition of said business service evaluation information* (Hellerstein in at least [0038] states: "The monitoring analysis module [ ] reads information from the eContract repository to determine what data should be collected and communicates this to the enactment module." (emphasis added) where the *means for notifying...* corresponds to the 'module' that 'communicates').

#### Claims 9:

Hellerstein/Main describe and/or disclose the limitations in claim 6 above. Hellerstein, as shown, further describes and/or discloses the following limitations:

- *means for registering said business service evaluation information in said business service information registry* (Hellerstein in at least claim 1 states: "...measuring the operation of the IT system in terms of one or more business metrics based on the electronic contract; and memory, operatively coupled to the at least one processor, for storing at least one of the electronic contract and results of the measurement operation." (emphasis added) where the emphasized text corresponds to a *registry* that stores *evaluation information* in that it stores 'results of the measurement operation');

Hellerstein does not show the following limitations, but Main, as shown, does:

- *means for notifying said business service information collector of the definition of said business service evaluation information and said items to be monitored so as to monitor said items to be monitored* (Main in at least [0012] states: "[T]he present invention is directed to a system and method for monitoring the performance of selected data processing jobs, comparing actual performance against the Service Level Agreement (SLA) to which each monitored job belongs..." (emphasis added) where 'monitoring [ ] performance' corresponds to *business service evaluation information* and the terms 'selected' and 'to which each monitored job belongs'

corresponds to those *items to be monitored*. In the abstract, reference is made to the term *notifies* wherein data is communicated pertaining to SLA data.); and

- *means for determining access authority to refer to said business service evaluation information* (Main in at least [0041] refers to logon screens and "valid user identification").

Note that both the references Hellerstein and Main describe inventions pertaining to 'service level management' (SLA) and 'SLA performance analysis', respectively. Therefore, it would have been obvious to one with ordinary skill in the art at the time of the invention to combine the inventions of Hellerstein and Main because the each provide components that, when combined, lead to a more generalized, secure, and robust service level agreement management system that entails both automation, along with its attendant improvements in productivity and management, performance analysis which is a necessary ingredient for improving the performance of the system, and security features (hence robustness).

#### Claims 10:

Hellerstein/Main describe and/or disclose the limitations in claim 6 above. Hellerstein does not show the following limitations, but Main, as shown, does:

- *means for authenticating said business service information collector to determine whether said items to be monitored notified from a pertinent business service evaluation analyzer may or may not be sent to a pertinent business service evaluation analyzer* (Main, in at least claim 4 discloses "[ ]" means for identifying which data processing jobs to monitor [ ]" and corresponds to the *service information collector to determine [ ] items to be monitored*. Further, in at least [0033] Main describes: "The client workstations [...] collects pertinent data [...] and analyzes this data [...]." (emphasis added) and thus meets the limitation of a *pertinent business service evaluation analyzer*.);

- *means for determining access authority to refer to said business service evaluation information* (see Main at [0041]); and
- *means for recording an instruction to monitor said items to be monitored* (Main, in at least claim 10 discloses "A program storage device [...] embodying a program of instructions [...] to perform method steps [...] for monitoring data processing jobs that are part of Service Level Agreements (SLAs) [ ]" (emphasis added) where 'storage device' corresponds to a *means for recording* and which stores instructions for 'monitoring data processing jobs' per the limitation.).

Note that both the references Hellerstein and Main describe inventions pertaining to 'service level management' (SLA) and 'SLA performance analysis', respectively. Therefore, it would have been obvious to one with ordinary skill in the art at the time of the invention to combine the inventions of Hellerstein and Main because the each provide components that, when combined, lead to a more generalized, secure, and robust service level agreement management system that entails both automation, along with its attendant improvements in productivity and management, performance analysis which is a necessary ingredient for improving the performance of the system, and security features (hence robustness).

**Claims 11:**

Hellerstein/Main describe and/or disclose the limitations in claim 6 above. Hellerstein, as shown, further describes and/or discloses the following limitations.

- *means for allowing said business service collector to collect information, every time said messages containing information pertinent to said items to be monitored are sent and received, that is pertinent to such items to be monitored out of such messages* (see Examiner's text in the following limitation); and
- *means for allowing said business service collector to collect information, every time said sending and receiving processing is encountered, that is pertinent to said items to be monitored out of a history* (Hellerstein, in at least [0017] states: "The evaluating

operation may be performed in real time or at a subsequent time. Further, the measuring operation may comprise accumulating a historical collection of IT data and evaluating results in terms of the one or more business metrics." (emphasis added) where the method of 'accumulating a historical collection' corresponds to the *business service collector* that collects information out of a *history*. The monitoring of data in 'real time' corresponds to the *means for [ ] collect[ing] every time* (emphasis added) since the notion of 'real time' effectively encompasses *events as they occur, hence, every time.*)

#### Claims 12:

Hellerstein/Main describe and/or disclose the limitations in claim 6 above. Hellerstein, as shown, further describes and/or discloses the following limitations.

- *means for determining a transmission destination business service evaluation analyzer of information pertinent to said collected items* (Hellerstein in at least [0038] states: "The monitoring analysis module [ ] reads information [ ] to determine what data should be collected and communicates this to the enactment module." (emphasis added) where the 'module' incorporates *means for determining.*);
- *means for determining whether or not information pertinent to said collected items to be monitored should be sent to said transmission destination business service evaluation analyzer* (See the rejection of the previous limitation.); *and*
- *means for decrypting information pertinent to said collected items to be monitored as said business service information* (see Examiner's Official Notice in the rejection of claim 13 below), *and then*
- *sending such encrypted information to said transmission destination business service evaluation analyzer* (Hellerstein, in at least [0036] refers numerous times to the action of sending data).

Hellerstein does not specifically show that such information is *encrypted*, but Examiner takes **Official Notice** that it is old and well-known as well as commonplace in the eCommerce arts

to employ methods and means for encrypting and decrypting information that is stored, transmitted, received or otherwise used. Therefore, it would have been obvious to one with ordinary skill in the art at the time of the invention to modify the invention of Hellerstein to incorporate various data security techniques such as encryption and decryption techniques because it would secure potentially valuable and proprietary information associated with automated processing and evaluation of service level agreements.

**Claims 13:**

Hellerstein/Main describe and/or disclose the limitations in claim 6 above. Hellerstein, as shown, further describes and/or discloses the following limitations.

- *means for decrypting said business service information received* (See Examiner's Official Notice in the preceding rejection of claim 12);
- *means for repeating said reception processing until all said business service information collected from a plurality of transactions that are sent and received among said plurality of service providers or among said services are received* (Hellerstein, in at least [0017] states: "The measuring operation may comprise monitoring one or more IT parameters [...] collecting measurement data from one or more sources, combining the collected measurement data, [...]." (emphasis added) where the action of 'monitoring' corresponds to *repeating said reception processing* and 'one or more IT parameters [or sources]' corresponds to a *plurality of service providers or among said service.*)
- *putting said business service information received together* (see the prior rejection and wherein 'combining the collected [data]' corresponds to the means for *putting [information together]*) *according to one said transaction, and storing such information as said business service information for the entire business flow, in order to realize one said service* (Hellerstein, in at least claim 28: "[ ] wherein the measuring step comprises collecting measurement data from one or more sources, combining the collected measurement data, and interpreting the collected

measurement data in terms of the one or more business metrics." (emphasis added) where the 'business metrics' corresponds to *business service information for the entire business flow*.);

- *means for repeating said reception processing until all said business service information acquired from said plurality of transactions that realize one business* (Hellerstein, in at least [0040] states: "The ecAnalyzer [ ] checks contracts for consistency and completeness." (emphasis added) where the said Analyzer 'checks' and thus provides means for *repeating* and the phrase *until all [ ] business information* corresponds to 'completeness');
- *putting said business service information received together according to one said business* (see Hellerstein claim 28 pertaining to 'combining the collected data' and in Hellerstein [0017] as noted above in the rejection of the second limitation), *and*
- *storing such information as said business service information for the entire business* (Hellerstein, in at least [0018] states: "The one or more business metrics may comprise a measurement that directly measures the performance of a business." (emphasis added) where the phrase 'a business' corresponds to service information *for the entire business*.);
- *means for collecting said service information and creating said business service evaluation information* (In Hellerstein at [0017], the monitoring (collection) of information is used for 'evaluating results in terms of the one or more business metrics.'; hence, *creates evaluation information*.); *and*
- *means for registering said created business service evaluation information in said business service information registry* (Hellerstein, in at least [0036] states: "Once data has been collected from the ecAgents and stored in the measurement repository..." (emphasis added) where the 'data' that is 'stored' corresponds to *registering [ ] evaluation information* since the 'measurement repository' stores performance related data.).

28. Claims 14, 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hellerstein/Main as applied to claim 6 above, and further in view of Cloud (US 6253369 B1).

**Claims 14:**

Hellerstein/Main describe and/or disclose the limitations in claim 6 above. Hellerstein/Main, as shown, further describe and/or disclose the following limitations:

- *means for retrieving said service provider, said service, or said sub-flow substituting for designated said service provider, said service or said flow from said business service information registry* (Hellerstein in [0038] "In operation, the transaction recognizer 200 takes as input measurement data from repository 110 and an eContract from repository 105 [ ] to determine the start and end of the business transactions," (emphasis added) where taking data 'from a repository' corresponds to *means for retrieving* and the 'business transactions' correspond to *said service or sub-flow*), *with said business service evaluation information* (Hellerstein in [0017] refers to "IT parameters and evaluating results in terms of [...] business metrics," (emphasis added) and thus corresponds to *business service evaluation information*), *said connection specification, said history specification and said flow definition being as retrieval conditions* (Hellerstein in [0017] also states "the measuring operation may comprise accumulating a historical collection of IT data..." and corresponds to *history specification and flow definition* as it relates to 'transactions', see e.g., Hellerstein [0016], hence, flow information.);
- *means for acquiring said history specification* (see Hellerstein [0017] as indicated in the prior paragraph) *and said connection specification of said service provider which works as said client or said server to said designated service provide* (see Hellerstein [0011] which refers to "interconnectivity" of "IT resources" such as "servers, software" wherein the said software refers to a *connection specification*), *service or sub-flow, said service provider which is selected out of said sub-flows and said retrieval results, and said service or said flow* (Hellerstein in [0017] also states "the measuring



operation may comprise accumulating a historical collection of IT data..." and corresponds to *history specification and flow definition* as it relates to 'transactions', see e.g., Hellerstein [0016], hence, flow information);

Hellerstein/Main do not show the following limitations, but Cloud, as shown, does.

- means for creating said data processing change procedure information which is used to change said designated service provider, service or sub-flow to said selected service provider, service, or sub-flow* (Cloud, in at least [0132] states: "[T]he work flow debugger provides on line addressability to items within the session control block and permits data field examination and modification." (emphasis added) where the last emphasized text corresponds to *change [ ] service*. Note, 'on line addressability' in effectuates *data processing change procedure information* as it permits the 'work flow debugger' to modify 'data fields', hence *procedure information*. Cloud further states in [0022]: "Another advantage of the invention is to facilitate business process re-engineering." (emphasis added) where 'facilitate' corresponds to means for *creating processing change procedure information* that ultimately *change*, hence lead to 'process re-engineering' and thus effect the same results. See also Hellerstein [0040]: "The ecQuery engine [ ] provides a mechanism [...] which allows the analyst to create new contracts by incrementally modifying existing contracts." (emphasis added) where 'modifying' corresponds to *change procedure information*);
- means for uploading said created data processing change procedure information to a service provider to which a connection destination will be changed* (see Examiner's **Official Notice** below); *and*
- means for transmitting an instruction to change connection destination to said service provider to which connection destination will be changed* (see Examiner's **Official Notice** below).

Examiner takes **Official Notice** that it is old and well-known as well as commonplace in the eCommerce arts to employ methods and means for uploading and transmitting various types

of information including *procedure information*. Therefore, it would have been obvious to one with ordinary skill in the art at the time of the invention to combine the inventions of Hellerstein/Main with that of Cloud because giving service level agreement management systems the capabilities to modify and/or augment procedures provides greater flexibility and applicability of the inventions to a broader range of problems.

#### Claims 15:

Hellerstein/Main describe and/or disclose the limitations in claim 6 above. Hellerstein/Main do not specifically describe and/or disclose the following limitations, but Cloud, as shown, does.

- *means for generating a connection program based on said data processing change procedure information received* (Cloud, in at least [0002] states: "A work flow management layer [ ] mediates between the client connectivity layer and the server connectivity layer performing the work flow management functions." (emphasis added) where the term 'mediates' corresponds to *generating a connection program based on...*);
- *means for stopping a service based on said instruction to change the connection destination received* (Cloud, in [0047-51] states: "Depending on design and on the outcome of the workflow, the workflow may result in one or more of these Disposition actions: [ ] Stoppage of processing with no further action." (emphasis added) where 'Disposition actions' in conjunction with 'design' correspond to *means for stopping...* In at least [0063] Cloud also states: "[...] a work flow may request connectivity between the work flow manager and multiple disparate back end systems. [...] The work flow just becomes a network server component that any client in the enterprise can access just by issuing a simple request. [...] Since request message design is based solely on actual business functions or processes, any client in the enterprise can issue the same request and access the same functions [...]." (emphasis added) where 'request connectivity' corresponds to *instruction to change the connection destination...*); and

- *means for capturing said connection program, with the program booted, and changing the connection destination* (Cloud, in at least [0117] states: "The workflow debugger has the ability to capture data from the request item area of the session control block and store the data in the input request file." (emphasis added) where the 'request item area' corresponds to the *connection program*.)

Examiner takes **Official Notice** that it is old and well-known as well as commonplace in the workflow systems arts that employ computer and processing systems and means that the execution of said means and instructions occurs with the program already active in computer memory; *i.e., with the program booted* and also to store such information, *i.e., capture*. Therefore, it would have been obvious to one with ordinary skill in the art at the time of the invention to combine the techniques of Cloud with those of Hellerstein and Main because it increases flexibility in workflow management techniques and allows critical information to be maintained and moved within the system and thereby facilitate the useful manipulation of workflow objects and services and effectively manage and evaluate service level agreements.

**Claims 16:**

Hellerstein/Main describe and/or disclose the limitations in claim 6 above. Main, as shown, further describes and/or discloses the following limitations:

- *means for receiving such new message processed by said connection program, if said judgment result reveals that said message is said new message and such processing unique to said service provider will be outsourced* (Main, in at least [0043] states: "Reasons for turning off SLAs include an application group not wishing to run their scheduled job(s) during a certain time period or if an SLA has not been properly finalized." Note that it is obvious that any service that is *outsourced* will not have a 'finalized SLA', and thus the actions of 'turning off SLAs' corresponds to a *judgment result* from a message that a service is to be outsourced. Main further states in the next paragraph: "[T]he user is presented with all the production computer platforms

that are being monitored. This information is updated every 15 minutes to alert the end-user of any discovered problems with SLAs." (emphasis added) where the emphasized text implies some communication or message that is 'presented' or information that is 'monitored' or 'updated'); and

Hellerstein/Main do not specifically describe and/or disclose the following limitations, but Cloud, as shown, does.

- *means for judging whether said message received is an existing message before changing a flow or a new message that was generated according to a change of connection destination* (Cloud, in at least [0118] states: "The journal display can be used to confirm that the two messages are identical," (emphasis added) where the confirmation process corresponds to the *means for judging*... Note also, that this text pertains to a 'workflow', hence associated with a *change in flow*.);
- *means for transferring said message to a processor unique to said service provider if said judgment result reveals that said message is an existing message* (Cloud, in at least [0065] states: "The common message header [...] and [...] uniquely identifies the requesting Client and associates the unit of work requested with that Client," (emphasis added) where 'uniquely identifies' corresponds to *unique to said service provider*. In addition, the notion of a 'requesting Client' implies a communication and, *ipso facto* the act of *transferring said message*.);
- *means for transferring such new message to said processor unique to said service provider after processing the new message by using said connection program, if said judgment result reveals that said message is said new message and processing will be executed in said processor unique to said processor* (See the rejection of the previous limitation. In addition, Cloud, in at least [0052] states: "During a logical session, MDP may receive a subsequent message that points to a new workflow," (emphasis added) and thus, implies *means for transferring such new message*.);

- *means for judging whether the transmission destination of said message is an existing service or a new service, executing transmission of said message received if the transmission destination is an existing service, or transmitting said message received to a new connection destination after processing said new message by using said connection program if the transmission destination is a new service (see the rejections of the previous limitations).*

Examiner takes **Official Notice** that it is old and well-known as well as commonplace in the workflow systems arts that employ computer and processing systems and means that the execution of said means and instructions occurs with the program already active in computer memory, *i.e., with the program booted* and also to store such information, *i.e., capture*. Therefore, it would have been obvious to one with ordinary skill in the art at the time of the invention to combine the techniques of Cloud with those of Hellerstein and Main because it increases flexibility in workflow management techniques and allows critical information to be maintained and moved within the system and thereby facilitate the useful manipulation of workflow objects and services to more effectively manage and evaluate service level agreements.

**Conclusion**

Any inquiry of a general nature or relating to the status of this application or concerning this communication or earlier communications from the Examiner should be directed to Dr. **Mark A. Fleischer** whose telephone number is **571.270.3925**. The Examiner can normally be reached on Monday-Friday, 9:30am-5:00pm. If attempts to reach the examiner by telephone are unsuccessful, the Examiner's supervisor, **James A. Reagan** whose telephone number is **571.272.6710** may be contacted.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://portal.uspto.gov/external/portal/pair> <<http://pair-direct.uspto.gov>>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at **866.217.9197** (toll-free).

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